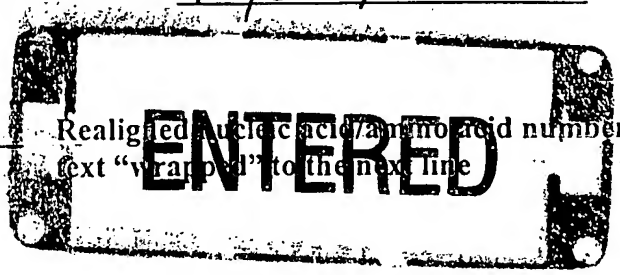
Pg 1/10

CRF Errors Edited by the STIC Systems Branch

Serial Number: 10/505,230 CRF Edit Date: 9/2/04
Edited by: AR



___ Realigned nucleic acid/amino acid numbers/text in cases where the sequence text "wrapped" to the next line

___ Corrected the SEQ ID NO. Sequence numbers edited were:

_____

___ Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited:

_____

1 Deleted: 1 invalid beginning/end-of-file text ; ___ page numbers

___ Inserted mandatory headings/numeric identifiers, specifically:

_____

___ Moved responses to same line as heading/numeric identifier, specifically:

_____

___ Other:

_____
_____
_____

Revised 09/09/2003

PCT

RAW SEQUENCE LISTING DATE: 09/02/2004
PATENT APPLICATION: **US/10/505,230** TIME: 17:26:27

Input Set : **A:\PTO.AMC.txt**
Output Set: **N:\CRF4\09022004\J505230.raw**

```
      3 <110> APPLICANT: VAN DEN BRINK, Gijs Robert
      4       PEPPELENBOSCH, Maikel Petrus
      5       HARDWICK, Hames Christopher Henry
      6       VAN DEVENTER, Sander Jan Hendrik
      8 <120> TITLE OF INVENTION: Hedgehog-related prophylaxis, therapy and diagnosis of
      9       GI tract carcinogenesis
     11 <130> FILE REFERENCE: 28902.nob10
C--> 13 <140> CURRENT APPLICATION NUMBER: US/10/505,230
     14 <141> CURRENT FILING DATE: 2004-08-20
     16 <150> PRIOR APPLICATION NUMBER: PCT/NL03/00127
     17 <151> PRIOR FILING DATE: 2003-02-20
     19 <150> PRIOR APPLICATION NUMBER: EP 02075690.4
     20 <151> PRIOR FILING DATE: 2002-02-20
     22 <160> NUMBER OF SEQ ID NOS: 3
     24 <170> SOFTWARE: PatentIn Ver. 2.1
     26 <210> SEQ ID NO: 1
     27 <211> LENGTH: 396
     28 <212> TYPE: PRT
     29 <213> ORGANISM: Homo sapiens
     31 <220> FEATURE:
     32 <223> OTHER INFORMATION: Human Desert Hedgehog protein
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     39 Ala Leu Pro Ala Gln Ser Cys Gly Pro Gly Arg Gly Pro Val Gly Arg
     40              20                  25                  30
     42 Arg Arg Tyr Ala Arg Lys Gln Leu Val Pro Leu Leu Tyr Lys Gln Phe
     43          35                  40                  45
     45 Val Pro Gly Val Pro Glu Arg Thr Leu Gly Ala Ser Gly Pro Ala Glu
     46      50                  55                  60
     48 Gly Arg Val Ala Arg Gly Ser Glu Arg Phe Arg Asp Leu Val Pro Asn
     49  65                  70                  75                  80
     51 Tyr Asn Pro Asp Ile Ile Phe Lys Asp Glu Glu Asn Ser Gly Ala Asp
     52                  85                  90                  95
     54 Arg Leu Met Thr Glu Arg Cys Lys Glu Arg Val Asn Ala Leu Ala Ile
     55              100                 105                 110
     57 Ala Val Met Asn Met Trp Pro Gly Val Arg Leu Arg Val Thr Glu Gly
     58          115                 120                 125
     60 Trp Asp Glu Asp Gly His His Ala Gln Asp Ser Leu His Tyr Glu Gly
     61      130                 135                 140
     63 Arg Ala Leu Asp Ile Thr Thr Ser Asp Arg Asp Arg Asn Lys Tyr Gly
     64 145                 150                 155                 160
     66 Leu Leu Ala Arg Leu Ala Val Glu Ala Gly Phe Asp Trp Val Tyr Tyr
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69 Glu Ser Arg Asn His Val His Val Ser Val Lys Ala Asp Asn Ser Leu
70             180                 185                 190
72 Ala Val Arg Ala Gly Gly Cys Phe Pro Gly Asn Ala Thr Val Arg Leu
73         195                 200                 205
75 Trp Ser Gly Glu Arg Lys Gly Leu Arg Glu Leu His Arg Gly Asp Trp
76     210                 215                 220
78 Val Leu Ala Ala Asp Ala Ser Gly Arg Val Val Pro Thr Pro Val Leu
79 225                 230                 235                 240
81 Leu Phe Leu Asp Arg Asp Leu Gln Arg Arg Ala Ser Phe Val Ala Val
82                 245                 250                 255
84 Glu Thr Glu Trp Pro Pro Arg Lys Leu Leu Leu Thr Pro Trp His Leu
85             260                 265                 270
87 Val Phe Ala Ala Arg Gly Pro Ala Pro Ala Pro Gly Asp Phe Ala Pro
88         275                 280                 285
90 Val Phe Ala Arg Arg Leu Arg Ala Gly Asp Ser Val Leu Ala Pro Gly
91     290                 295                 300
93 Gly Asp Ala Leu Arg Pro Ala Arg Val Ala Arg Val Ala Arg Glu Glu
94 305                 310                 315                 320
96 Ala Val Gly Val Phe Ala Pro Leu Thr Ala His Gly Thr Leu Leu Val
97                 325                 330                 335
99 Asn Asp Val Leu Ala Ser Cys Tyr Ala Val Leu Glu Ser His Gln Trp
100             340                 345                 350
102 Ala His Arg Ala Phe Ala Pro Leu Arg Leu Leu His Ala Leu Gly Ala
103         355                 360                 365
105 Leu Leu Pro Gly Gly Ala Val Gln Pro Thr Gly Met His Trp Tyr Ser
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108 Arg Leu Leu Tyr Arg Leu Ala Glu Glu Leu Leu Gly
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112 <210> SEQ ID NO: 2
113 <211> LENGTH: 293
114 <212> TYPE: PRT
115 <213> ORGANISM: Homo sapiens
117 <220> FEATURE:
118 <223> OTHER INFORMATION: Human Indian Hedgehog protein
120 <400> SEQUENCE: 2
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124 Glu Asp Gly His His Ser Glu Glu Ser Leu His Tyr Glu Gly Arg Ala
125              20                  25                  30
127 Val Asp Ile Thr Thr Ser Asp Arg Asp Arg Asn Lys Tyr Gly Leu Leu
128          35                  40                  45
130 Ala Arg Leu Ala Val Glu Ala Gly Phe Asp Trp Val Tyr Tyr Glu Ser
131      50                  55                  60
133 Lys Ala His Val His Cys Ser Val Lys Ser Glu His Ser Ala Ala Ala
134  65                  70                  75                  80
136 Lys Thr Gly Gly Cys Phe Pro Ala Gly Ala Gln Val Arg Leu Glu Ser
137                  85                  90                  95
139 Gly Ala Arg Val Ala Leu Ser Ala Val Arg Pro Gly Asp Arg Val Leu
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PATENT APPLICATION: US/10/505,230 TIME: 17:26:27

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```
140              100                 105                 110
142 Ala Met Gly Glu Asp Gly Ser Pro Thr Phe Ser Asp Val Leu Ile Phe
143          115                 120                 125
145 Leu Asp Arg Glu Pro His Arg Leu Arg Ala Phe Gln Val Ile Glu Thr
146      130                 135                 140
148 Gln Asp Pro Pro Arg Arg Leu Ala Leu Thr Pro Ala His Leu Leu Phe
149 145                 150                 155                 160
151 Thr Ala Asp Asn His Thr Glu Pro Ala Ala Arg Phe Arg Ala Thr Phe
152                 165                 170                 175
154 Ala Ser His Val Gln Pro Gly Gln Tyr Val Leu Val Ala Gly Val Pro
155              180                 185                 190
157 Gly Leu Gln Pro Ala Arg Val Ala Ala Val Ser Thr His Val Ala Leu
158          195                 200                 205
160 Gly Ala Tyr Ala Pro Leu Thr Lys His Gly Thr Leu Val Val Glu Asp
161      210                 215                 220
163 Val Val Ala Ser Cys Phe Ala Ala Val Ala Asp His His Leu Ala Gln
164 225                 230                 235                 240
166 Leu Ala Phe Trp Pro Leu Arg Leu Phe His Ser Leu Ala Trp Gly Ser
167                 245                 250                 255
169 Trp Thr Pro Gly Glu Gly Val His Trp Tyr Pro Gln Leu Leu Tyr Arg
170              260                 265                 270
172 Leu Gly Arg Leu Leu Leu Glu Glu Gly Ser Phe His Pro Leu Gly Met
173          275                 280                 285
175 Ser Gly Ala Gly Ser
176      290
179 <210> SEQ ID NO: 3
180 <211> LENGTH: 462
181 <212> TYPE: PRT
182 <213> ORGANISM: Homo sapiens
184 <220> FEATURE:
185 <223> OTHER INFORMATION: Human Sonic hedgehog protein
187 <400> SEQUENCE: 3
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191 Leu Val Cys Ser Gly Leu Ala Cys Gly Pro Gly Arg Gly Phe Gly Lys
192              20                  25                  30
194 Arg Arg His Pro Lys Lys Leu Thr Pro Leu Ala Tyr Lys Gln Phe Ile
195          35                  40                  45
197 Pro Asn Val Ala Glu Lys Thr Leu Gly Ala Ser Gly Arg Tyr Glu Gly
198      50                  55                  60
200 Lys Ile Ser Arg Asn Ser Glu Arg Phe Lys Glu Leu Thr Pro Asn Tyr
201  65                  70                  75                  80
203 Asn Pro Asp Ile Ile Phe Lys Asp Glu Glu Asn Thr Gly Ala Asp Arg
204                  85                  90                  95
206 Leu Met Thr Gln Arg Cys Lys Asp Lys Leu Asn Ala Leu Ala Ile Ser
207              100                 105                 110
209 Val Met Asn Gln Trp Pro Gly Val Lys Leu Arg Val Thr Glu Gly Trp
210          115                 120                 125
212 Asp Glu Asp Gly His His Ser Glu Glu Ser Leu His Tyr Glu Gly Arg
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```
213     130                 135                 140
215 Ala Val Asp Ile Thr Thr Ser Asp Arg Asp Arg Ser Lys Tyr Gly Met
216 145                 150                 155                 160
218 Leu Ala Arg Leu Ala Val Glu Ala Gly Phe Asp Trp Val Tyr Tyr Glu
219                 165                 170                 175
221 Ser Lys Ala His Ile His Cys Ser Val Lys Ala Glu Asn Ser Val Ala
222             180                 185                 190
224 Ala Lys Ser Gly Gly Cys Phe Pro Gly Ser Ala Thr Val His Leu Glu
225         195                 200                 205
227 Gln Gly Gly Thr Lys Leu Val Lys Asp Leu Ser Pro Gly Asp Arg Val
228     210                 215                 220
230 Leu Ala Ala Asp Asp Gln Gly Arg Leu Leu Tyr Ser Asp Phe Leu Thr
231 225                 230                 235                 240
233 Phe Leu Asp Arg Asp Asp Gly Ala Lys Lys Val Phe Tyr Val Ile Glu
234                 245                 250                 255
236 Thr Arg Glu Pro Arg Glu Arg Leu Leu Leu Thr Ala Ala His Leu Leu
237             260                 265                 270
239 Phe Val Ala Pro His Asn Asp Ser Ala Thr Gly Glu Pro Glu Ala Ser
240         275                 280                 285
242 Ser Gly Ser Gly Pro Pro Ser Gly Gly Ala Leu Gly Pro Arg Ala Leu
243     290                 295                 300
245 Phe Ala Ser Arg Val Arg Pro Gly Gln Arg Val Tyr Val Val Ala Glu
246 305                 310                 315                 320
248 Arg Asp Gly Asp Arg Arg Leu Leu Pro Ala Ala Val His Ser Val Thr
249                 325                 330                 335
251 Leu Ser Glu Glu Ala Ala Gly Ala Tyr Ala Pro Leu Thr Ala Gln Gly
252             340                 345                 350
254 Thr Ile Leu Ile Asn Arg Val Leu Ala Ser Cys Tyr Ala Val Ile Glu
255         355                 360                 365
257 Glu His Ser Trp Ala His Arg Ala Phe Ala Pro Phe Arg Leu Ala His
258     370                 375                 380
260 Ala Leu Leu Ala Ala Leu Ala Pro Ala Arg Thr Asp Arg Gly Gly Asp
261 385                 390                 395                 400
263 Ser Gly Gly Gly Asp Arg Gly Gly Gly Gly Gly Arg Val Ala Leu Thr
264                 405                 410                 415
266 Ala Pro Gly Ala Ala Asp Ala Pro Gly Ala Gly Ala Thr Ala Gly Ile
267             420                 425                 430
269 His Trp Tyr Ser Gln Leu Leu Tyr Gln Ile Gly Thr Trp Leu Leu Asp
270         435                 440                 445
272 Ser Glu Ala Leu His Pro Leu Gly Met Ala Val Lys Ser Ser
273     450                 455                 460
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VERIFICATION SUMMARY DATE: 09/02/2004
PATENT APPLICATION: **US/10/505,230** TIME: 17:26:28

Input Set : **A:\PTO.AMC.txt**
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L:13 M:270 C: Current Application Number differs, Replaced Current Application Number